KAWASAKI INSTITUTE OF INDUSTRIAL PROMOTION

Innovation Center of NanoMedicine

Sep. 19th (FRI), 2025

- **Free to join (on-site and online)**
- **Meeting room 3001 in iCONM**

JSPS-DAAD Bilateral Collaboration (Japan & Germany)

Rationale drug design and treatment protocol based on singlet oxygen imaging for PDT

Register from here for ON-SITE

Register from here for ONLINE

13:30-13:35	**Opening Remarks**	**Drs. Haochen Guo (iCONM) and Takahiro Nomoto (UTokyo)**
13:35-14:35	***Singlet oxygen imaging***	**Adj. Prof. Steffen Hackbarth (Humboldt-Universität zu Berlin)**
14:35-15:20	***iPDT for malignant gliomas***	**Assist. Prof. Kenta Nagai (Tokyo Medical University)**
15:20-15:30	***Coffee Break***	
15:30-16:20	***Drug delivery for photomedicine***	**Assoc. Prof. Takahiro Nomoto (the University of Tokyo)**
16:20-16:50	***Application of Iron Chelator in 5-ALA PDT***	**Dr. Haochen Guo (iCONM)**
16:50-17:20	***Polymeric NanoMedicine for Brain Cancer***	**Dr. Sabina Quader (iCONM)**
17:20-17:30	**Closing Remarks**	**Prof. Emer. Kazunori Kataoka**

Adj. Prof. Steffen Hackbarth
Department of Physics,
Humboldt-Universität zu Berlin
Physics

Steffen Hackbarth is a physicist. His work is focused on NIR spectroscopy with the highest possible sensitivity, especially of singlet oxygen phosphorescence . The technology developed by his group is unchallenged in the world at the moment - parts of this technology are available via the spin-off SHB Analytics GmbH. Besides this, he is interested in the mechanism behind the primary steps of photosensitization in vivo.
His recent work includes collaboration with Prof. Hiroshi Maeda, revealing important aspects of oxygen during PDT.

Assist. Prof. Kenta Nagai
Department of Neurosurgery,
Tokyo Medical University
Medicine

Kenta Nagai is a clinician specializing in neurosurgery. His group was the first in the world to conduct investigator-initiated clinical trials of PDT using talaporfin sodium (Laserphyrin®) for malignant brain tumors and to have the drug covered by insurance. The clinical results of PDT for malignant brain tumors are the world's top class, with more than 100 cases since the insurance coverage was implemented. His recent study revealed that light intensity in interstitial PDT critically affects the ultimate therapeutic efficacy.

Assoc. Prof. Takahiro Nomoto
Graduate School of Arts and Sciences,
the University of Tokyo
Drug delivery

Takahiro Nomoto's expertise is in biomaterials and drug delivery. He develops drug delivery systems by re-interpreting/constructing Ringsdorf's model of polymer-drug conjugates. He has recently developed polymer-drug conjugates for photodynamic therapy and polymeric iron chelators for potentially modulating the tumor microenvironment. His team conducts research to create new medical technologies by integrating various research fields with a focus on drug delivery. His recent interest is in making PDT precise and quantitative.